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10/541,221	07/01/2005	Akihiro Watabe	071971-0281	4946

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MCDERMOTT WILL & EMERY LLP
600 13TH STREET, N.W.
WASHINGTON, DC 20005-3096

EXAMINER	
CLARK, MAXWELL A	

ART UNIT	PAPER NUMBER
2616	

MAIL DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/541,221	WATABE ET AL.	
	Examiner	Art Unit	
	MAXWELL A. CLARK	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 June 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-7,11 and 14-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7,11 and 14-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 5 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. A VBV buffer size parameter that is changed to a maximum value allowed y the ISO 13818-2 standard was not described in the specification in such

a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1 and 11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, line 7, the phrase "encoded by the input code" renders the claim indefinite because it is unclear how the input code itself achieves encoding, rather it is understood that the input code is being encoded by elements in the stream controller as shown in fig. 1.

The term "minimizing" in claim 7 is a relative term which renders the claim indefinite. The term "minimizing" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Regarding claim 11, the phrase "such that" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

> the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tahara et al. (US 6,671,323 B1) in view of Sakazawaet al (US 6,075,900).

Regarding claim 1, Tahara discloses, receiving an input code stored in a hierarchical data structure, the input code including a parameter related to the amount of data encoded by the input code (col. 11, lines 51-54, wherein the data structure discussed corresponds to a hierarchical data structure; col. 11, lines 60-62, data items that represent bit length correspond to the parameter related to the amount of data encoded by the input code; col. 14, lines 37-39, wherein the bit rate extension, bit rate value in the sequence header and the VBV buffer size extension correspond to the input code including a parameter related to the amount of data encoded by the input code), user data at a first level of the hierarchical data structure and main data at a second level of the hierarchical data structure (col. 12, lines 54-63, wherein described in main and user data in a specific structure when the conditional if statement described holds true). Tahara does not expressly disclose the user data at a first level and the main data at a second level of the hierarchical data structure. Tahara does disclose the user

and main data at distinct levels in the data structure as described and also illustrated in fig. 26. Therefore it would have been obvious to one of ordinary skill in the art at the time of the application to label any of the distinct levels of the data structure in Tahara as a first, second, and further levels per specific data, generating an output code stored in the hierarchical data structure by modifying the input code (col. 24, lines 9-14), wherein the main data included in the output code is identical to the main data included in the input code (col. 24, lines 15-20). Tahara does not expressly disclose moving the user data to a third level of the hierarchical data structure, and changing the parameter. Sakazawa discloses moving picture data hierarchy formation, in which low frequency components of I picture data are assigned to a first hierarchy, high frequency components of I picture data are assigned to a second hierarchy, low frequency components of P picture data are assigned to a third hierarchy, high frequency components of the P picture data are assigned to a fourth hierarchy, low frequency components of B picture data are assigned to a fifth hierarchy, and high frequency components of the P picture data are assigned to a sixth hierarchy with another feature of coded moving picture data hierarchy formation, in which low frequency components of I picture data and low frequency components of P picture data are assigned to a first hierarchy, high frequency components of I picture data and high frequency components of P picture data are assigned to a second hierarchy, low frequency components of B picture data are assigned to a third hierarchy, and high frequency components of B picture data are assigned to a fourth hierarchy with another feature of coded moving picture data hierarchy formation, in which low frequency components of I picture data

and low frequency components of P picture data are assigned to a first hierarchy, high frequency components of I picture data and intermediate frequency components of P picture data are assigned to a second hierarchy, high frequency components of P picture data are assigned to a third hierarchy, low frequency components of B picture data are assigned to a fourth hierarchy, and high frequency components of B picture data are assigned to a fifth hierarchy col. 2, lines 10-34, for the purpose of obtaining the hierarchical formation easily without coding efficiency deterioration. It would have been obvious to on of ordinary skill in the art at the time of the application to move the user data to a third level of the hierarchical data structure, as in Sakazawa, for the purpose of obtaining the hierarchical formation easily without coding efficiency deterioration.

Regarding claim 2, Tahara discloses the hierarchical data structure conforms with the ISO 13818 standard (col. 1, lines 14-15, wherein the disclosed material is based on the MPEG (Moving Picture Experts Group) technology standardized as ISO/IEC 13818), the parameter related to the amount of data encoded by the input code is one of a bit rate value, a VBV (Video Buffering Verifier) buffer size value, and a VBV delay value; and the main data comprises compressed video data (col. 18, lines 25-45, wherein the extension_and_user_data(1) function is used to describe only the data elements defined by user_data including VBV delay and VBV buffer).

Regarding claim 3, Tahara discloses the first level of the hierarchical data structure is the Group of Pictures (GOP) layer; and the third level of the hierarchical data structure is the picture layer (fig. 26, col. 5, lines 29-30, col. 12, lines 55-60 and

col13, lines 1-7, wherein discloses in the different levels corresponding to the GOP layers and the picture layers).

Regarding claim 4, Tahara discloses the first level of the hierarchical data structure is the picture layer; and the third level of the hierarchical data structure is the Group of Pictures (GOP) layer. (fig. 26, col. 5, lines 29-30, col. 12, lines 55-60 and col13, lines 1-7, wherein discloses in the different levels corresponding to the GOP layers and the picture layers).

Regarding claim 6, Tahara discloses generating additional information for distinguishing the user data included in the input code from the other main data, wherein generation of the output code is advanced according to the additional information (col. 12, lines 31-33, wherein the extension_and_ user_data(0) function is used to define extension data and user data for the sequence layer of an MPEG bit stream corresponds to generating additional information for distinguishing the user data included in the input code from the other main data, wherein generation of the output code is advanced according to the additional information).

Regarding claim 7, Tahara discloses synchronization between main data and user data in the output code (col. 6, lines 55-58, wherein video data "V" and audio data "A" are packed in each frame and the stream can be edited easily along the frame boundaries defined by a frame sync which corresponds to synchronization between main data and user data in the output code).

Claims 11 and 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tahara et al. (US 6,671,323 B1) in view of Sakazawaet al (US 6,075,90).

Regarding claim 11, Tahara discloses a data analyzing section adapted to identify in an input code stored in a hierarchical data structure a parameter related to the amount of data encoded by the input code, user data and main data at a second level of the hierarchical data structure (col. 7, lines 36-43, wherein the ancillary data separating circuit 101 extracts ancillary data from the blanking interval of input video data, as shown in FIG. 8, it extracts the ancillary data inserted in the vertical blanking interval of input video data and the line number of the ancillary data, such ancillary data includes, but is not limited to, text data, closed-captioning data, VITC (vertical interval time code) defined by SMPTE RP164, and LTC (linear time code) defined by RP196 which corresponds to a data analyzing section adapted to identify in an input code stored in a hierarchical data structure a parameter related to the amount of data encoded by the input code, user data at a first level of the hierarchical data structure, and main data at a second level of the hierarchical data structure, multiplexing section which produces an output code in which the input code is modified (col. 4, lines 12-19, wherein a decoding apparatus for decoding the encoded streams generated by encoding input video data obtains the ancillary data contained in the picture area of the encoded streams, decodes the encoded streams to generate decoded video data, and multiplexes the decoded video data and ancillary data to generate the same data as the input video data and col. 21, lines 4-7, wherein the multiplexing circuit 330 receives a transport stream from each of the system target decoder buffers 321 to 329 and multiplexes the transport streams according to the schedule set by the controller 300 with claims 26 and 27 correspond to a multiplexing section which produces an output

code in which the input code is modified). Tahara does not expressly disclose the user data at a first level and the main data at a second level of the hierarchical data structure. Tahara does disclose the user and main data at distinct levels in the data structure as described and also illustrated in fig. 26. Therefore it would have been obvious to one of ordinary skill in the art at the time of the application to label any of the distinct levels of the data structure in Tahara as a first, second, and further levels per specific data. Tahara does not expressly disclose moving the user data to a third level of the hierarchical data structure, and changing the parameter. Sakazawa discloses moving picture data hierarchy formation, in which low frequency components of I picture data are assigned to a first hierarchy, high frequency components of I picture data are assigned to a second hierarchy, low frequency components of P picture data are assigned to a third hierarchy, high frequency components of the P picture data are assigned to a fourth hierarchy, low frequency components of B picture data are assigned to a fifth hierarchy, and high frequency components of the P picture data are assigned to a sixth hierarchy with another feature of coded moving picture data hierarchy formation, in which low frequency components of I picture data and low frequency components of P picture data are assigned to a first hierarchy, high frequency components of I picture data and high frequency components of P picture data are assigned to a second hierarchy, low frequency components of B picture data are assigned to a third hierarchy, and high frequency components of B picture data are assigned to a fourth hierarchy with another feature of coded moving picture data hierarchy formation, in which low frequency components of I picture data and low

frequency components of P picture data are assigned to a first hierarchy, high frequency components of I picture data and intermediate frequency components of P picture data are assigned to a second hierarchy, high frequency components of P picture data are assigned to a third hierarchy, low frequency components of B picture data are assigned to a fourth hierarchy, and high frequency components of B picture data are assigned to a fifth hierarchy col. 2, lines 10-34, for the purpose of obtaining the hierarchical formation easily without coding efficiency deterioration. It would have been obvious to on of ordinary skill in the art at the time of the application to move the user data to a third level of the hierarchical data structure, as in Sakazawa, for the purpose of obtaining the hierarchical formation easily without coding efficiency deterioration.

Regarding claim 14, Tahara discloses the hierarchical data structure conforms with the ISO 13818 standard (col. 1, lines 14-15, wherein the disclosed material is based on the MPEG (Moving Picture Experts Group) technology standardized as ISO/IEC 13818), the parameter related to the amount of data encoded by the input code is one of a bit rate value, a VBV (Video Buffering Verifier) buffer size value, and a VBV delay value; and the main data comprises compressed video data (col. 18, lines 25-45, wherein the extension_and_user_data(1) function is used to describe only the data elements defined by user_data including VBV delay and VBV buffer).

Regarding claim 15, Tahara discloses the first level of the hierarchical data structure is the Group of Pictures (GOP) layer; and the third level of the hierarchical data structure is the picture layer (fig. 26, col. 5, lines 29-30, col. 12, lines 55-60 and

col13, lines 1-7, wherein discloses in the different levels corresponding to the GOP layers and the picture layers).

Regarding claim 16, Tahara discloses the first level of the hierarchical data structure is the picture layer; and the third level of the hierarchical data structure is the Group of Pictures (GOP) layer. (fig. 26, col. 5, lines 29-30, col. 12, lines 55-60 and col13, lines 1-7, wherein discloses in the different levels corresponding to the GOP layers and the picture layers).

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Botsford, III; Nelson et al. (US 5907363 A1), Ando; Yuji (US 6137946 A1), Yogeshwar; Jay et al. (US 6219043 B1), Gringeri; Steven et al. (US 6233226 B1), Tahara; Katsumi et al. (US 6529550 B2), Suzuki; Takao et al. (US 6654544 B1).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MAXWELL A. CLARK whose telephone number is (571) 270-1956. The examiner can normally be reached on Monday through Thursday 7:30A.M. to 5P.M. EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (571) 272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

August 25, 2008

/Maxwell A. Clark/
Examiner, Art Unit 2616
/Huy D. Vu/
Supervisory Patent Examiner, Art Unit 2616